UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
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ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/764,485	HE ET AL.
	Examiner	Art Unit	
	AHMED ELALLAM	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01/27/2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>27 January 2004</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>09/15/2006</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

DETAILED ACTION

Drawings

1.   Figures 1, 2A, 2B and 3 should be designated by a legend such as --Prior Art--
because only that which is old is illustrated. See MPEP § 608.02(g). Corrected
drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action
to avoid abandonment of the application. The replacement sheet(s) should be labeled
"Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct
any portion of the drawing figures. If the changes are not accepted by the examiner, the
applicant will be notified and informed of any required corrective action in the next Office
action. The objection to the drawings will not be held in abeyance.

2.   The drawings or figure 4 are objected to under 37 CFR 1.83(a) because they fail
to show a plurality of virtual private devices 120 as described in the specification,
paragraph [0057]. Any structural detail that is essential for a proper understanding of
the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected
drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office
action to avoid abandonment of the application. Any amended replacement drawing
sheet should include all of the figures appearing on the immediate prior version of the
sheet, even if only one figure is being amended. The figure or figure number of an
amended drawing should not be labeled as "amended." If a drawing figure is to be
canceled, the appropriate figure must be removed from the replacement sheet, and
where necessary, the remaining figures must be renumbered and appropriate changes

made to the brief description of the several views of the drawings for consistency.

Additional replacement sheets may be necessary to show the renumbering of the

remaining figures. Each drawing sheet submitted after the filing date of an application

must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office

action. The objection to the drawings will not be held in abeyance.

3.   The drawings of figure 5 is objected to under 37 CFR 1.83(a) because they fail to

show the plurality of mapping/demapping devices 10, virtual interface device 80, data

processing and dispatching device 90, virtual private devices 120, virtual bridge device

100 and RPR device 110 as described in the specification paragraph [0094]. Any

structural detail that is essential for a proper understanding of the disclosed invention

should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in

compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid

abandonment of the application. Any amended replacement drawing sheet should

include all of the figures appearing on the immediate prior version of the sheet, even if

only one figure is being amended. The figure or figure number of an amended drawing

should not be labeled as "amended." If a drawing figure is to be canceled, the

appropriate figure must be removed from the replacement sheet, and where necessary,

the remaining figures must be renumbered and appropriate changes made to the brief

description of the several views of the drawings for consistency. Additional replacement

sheets may be necessary to show the renumbering of the remaining figures. Each

drawing sheet submitted after the filing date of an application must be labeled in the top

margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If

the changes are not accepted by the examiner, the applicant will be notified and

informed of any required corrective action in the next Office action. The objection to the

drawings will not be held in abeyance.

4.   The drawings of figure 7 is objected to under 37 CFR 1.83(a) because they fail to

show the plurality of NNIs designed to couple with the digital transmission network to

transmit data, the plurality of mapping/demapping devices 10, a virtual interface device

80 coupled with said UNIs and also coupled with said NNIs via the mapping/demapping

devices 10, a data processing and dispatching device 90 coupled with the virtual

interface device 80, a plurality of virtual   private devices 120 and a virtual bridge device

100 and a RPR device 110 coupled with the data processing and dispatching device as

described in the specification paragraph [0160]. Any structural detail that is essential for

a proper understanding of the disclosed invention should be shown in the drawing.

MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are

required in reply to the Office action to avoid abandonment of the application. Any

amended replacement drawing sheet should include all of the figures appearing on the

immediate prior version of the sheet, even if only one figure is being amended. The

figure or figure number of an amended drawing should not be labeled as "amended." If

a drawing figure is to be canceled, the appropriate figure must be removed from the

replacement sheet, and where necessary, the remaining figures must be renumbered

and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5.   Claims 1-14 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the existence of plurality of virtual private devices (120, figure 4), does not reasonably provide enablement for the virtual interface device outputting data frames to corresponding device interfaces. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

The claimed "the virtual interface outputting the data frames to corresponding device interfaces" is not clearly and concisely described. Reference is made to the specification, page 10, paragraph [0059], through page 11.

The method described with regard to figure 4F provides for **the virtual interface device** (figure 4, unit 80) that perform matching action to the data frames according to classifying rules. (Data frame received from the UNI). The virtual interface device modifies the data frames according to classifying rules (step 2), the virtual interface device transfers the modified data frames to the data processing and dispatching device (step 3), the data processing and dispatching device finds a corresponding processing device according to the data type number in the data frames (step 4). However, in step 5, it is recited that the data processing and dispatching device transfers the data frames to the corresponding processing device. If the corresponding processing device is a **virtual interface device** then go to step 8: the **virtual interface device** finds the corresponding **device interface** according to the data type number in the data frames.

It is not clear what virtual interface device is referred to in step 8, the drawing of figure 4 shows only one virtual interface device (80), while in the same time it appears that a corresponding processing devices are a virtual interface devices. The disclosed processing devices being virtual interface devices is not enabled given the single disclosed **virtual interface device 80.**

In addition, step 9 specifies that **the virtual interface device** modifies the data frames, i.e., it deletes the data type number from the data frames. However, it is already indicated in step 2, that the **virtual interface device** modifies the data frames according to classifying rules, i.e., inserts a data type number in the data frames. Therefore, It appears that the **same virtual interface device modifies the data frame by** inserting a data type number, and then deleting the data type number from the same

frame by the same virtual interface device. Such insertion and deletion of the same

content by the same "virtual interface device" is confusing such that it casts a doubt to

what is sought to be patented as in claim 1.

Regarding claims 2-14, these claims depend from claim 1, thus they are subject

to the same rejections.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

6.   Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

Regarding claim 1, the preamble in claim 1 refers to a plurality of elements/ and

devices, such as UNI, NNI, mapping/demapping device, a virtual interface device, and

control device. However, the body of the claim doesn't relate to all the element/or

devices in the preamble. Further the body of the claim refers to the virtual interface

device outputting the data frames to corresponding device interfaces, however the

"device interfaces" limitation doesn't appear in the preamble. In addition, it is not clear

what is referred to as device interfaces in accordance with the specification (see

rejection under 112 1st above). Therefore, the claimed limitation of "the virtual interface

device outputting the data frames to corresponding device interfaces" fails to particularly

point out the subject matter sought to be patented.

Claims 2-14, depends from claim 1, thus they are subject to the same rejections.

Claim Objections

7.   Claim13 is objected to under 37 CFR 1.75(c), as being of improper dependent

form for failing to further limit the subject matter of a previous claim. Applicant is

required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper

dependent form, or rewrite the claim(s) in independent form.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by
another filed in the United States before the invention by the applicant for patent or (2) a patent
granted on an application for patent by another filed in the United States before the invention by the
applicant for patent, except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

8.   Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Kong et

al, US 20020176450 A1. Hereinafter referred to as Kong.

Regarding claim 1 (as best understood), with regard to figure 1, Kong discloses a

method for processing data through a system for accessing and transmitting different

data frames in SONET/SDH optical networks system (claimed digital transmission

network), the method comprising:

a line interface in a SONET mapper/framer (unit 62, figure1) (claimed virtual

interface device) for selectively carrying Ethernet signals by classifying the

packets in Ethernet signals and mapping the classified packets to virtual

concatenation channels so to provide different COS (Class Of Service) to the clients ,

see paragraphs [0014] and [0034]. (claimed virtual interface device classifying the

data frames; and the virtual interface device outputting the data frames to

corresponding device interfaces).

Regarding claim 2, with reference to figure 1, Kong discloses a router/switch in

connection with mapper/framer for switching the data frames. (Claimed

method also comprises the step of the virtual bridge device switching the

data frames).

Regarding claims 3 and 4 , Kong discloses encapsulating the Ethernet packets

within a type of frame format such as POS or GFR (within the framer/mapper). See

paragraph [0042]. (Claimed virtual private device processing the data frames as in

claim 3 and relaying and/or converging and/or deconverging the data frames, as in

claim 4).

Regarding claim 5, Kong discloses encapsulating the Ethernet packets within a

type of frame format such as POS or GFR. See paragraph [0042]. Kong additionally

discloses that the GFP can be used to carry Ethernet MAC frames over SONET in a

ring topology, see paragraph [0036]. (Claimed the virtual private device processing the

data frames also comprises the RPR device processing the data frames).

Regarding claims 6-8, with reference to figure 3, Kong discloses the functionality

of the interface classifies the packets and allocates the packets onto a plurality of

channels 108-1, . .. 108-m. see paragraph [0059]. (Claimed processing the data

frames comprises terminating sending and/or relaying and/or beginning to send the

data frames).

Regarding claims 9-14 , with reference to figure 3, Kong discloses the interface being divided into two blocks the functionality of the 100 and 102, Block 100 takes Ethernet signals, classifies the packets in the Ethernet pipes, and allocates the packets onto a plurality of channels 108-1, . . . 108-m. Block 102 maps the packets on channels 108-1, . . . 108-m into SONET payload and allocate them onto VC channels 112-1, . . . 112-m. Block 100 includes a mapping mechanism 106 which has the basic functionality of terminating the Ethernet line coding, to use GbE (Gigabit Ethernet) , Kong further discloses that block 106 also encapsulated the Ethernet frame with GFP frame. An extension header is used or a double tagged method of the Ethernet frame using VCL or VLAN tag (see FIG. 6). (it should be noted that a reverse process id required for data frames coming from the opposite direction, i.e. from the sonnet network toward clients).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: See Form PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AHMED ELALLAM whose telephone number is (571) 272-3097. The examiner can normally be reached on 7-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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12/11/07
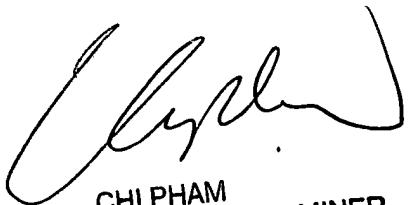
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